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ABSTRACT

Reading comprehension can be more effectively taught using new instructional frameworks--such as explicit comprehension instruction--rather than the basal reading model. Traditionally, comprehension has been taught through a process of mentioning the skill that students should apply, practicing the skill in workbooks, and assessing student responses. Explicit comprehension instruction, however, focuses on direct explanations of comprehension strategies, guided practice to understand how the strategy is applied, and the transfer of comprehension strategies to new materials. Studies of these comprehension approaches, including inference training and reciprocal teaching, reveal that reading comprehension can be explicitly taught. There are several basic elements involved in explicit comprehension instruction: (1) complex strategies are not broken down into separate, sequentially ordered subskills; (2) multiple answers exist for all questions; (3) multiple ways exist to apply a strategy; and (4) feedback is suggestive rather than corrective, in that teachers praise students for applying parts of the strategy appropriately and encourage students to consider alternative ways of approaching a problem. Because guided practice and strategy explanations may be difficult for teachers unfamiliar with the process, explicit comprehension instruction can be implemented gradually, simultaneously decreasing the number of teacher controlled tasks while increasing student responsibility and control. (Two tables outlining the stages of responsibility in inference training and question-answer relationship tasks are included, and one footnote and 50 references are appended.) (MM)

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A READING RESEARCH AND EDUCATION CENTER REPORT

Technical Report No. 427

EXPLICIT COMPREHENSION INSTRUCTION: A REVIEW OF RESEARCH AND A NEW CONCEPTUALIZATION OF INSTRUCTION

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Abstract

The purpose of this paper is to synthesize recent research about comprehension instruction and to present a conceptualization of explicit comprehension instruction based on that research. To do this, we give an historical perspective on classroom instruction of comprehension skills and formulate concepts about explicit comprehension instruction based on the most important studies of the last 5 or 6 years. Finally, we discuss some questions and concerns about this conceptualization.

EXPLICIT COMPREHENSION INSTRUCTION: A REVIEW OF RESEARCH AND A NEW CONCEPTUALIZATION OF INSTRUCTION

Comprehension instruction plays an important role in the reading curriculum of today's schools. And, for the most part, current reading curriculum follows closely the paradigm set by basal reading programs--a paradigm in which instruction consists of allowing students to practice skills independently on skill pages in preparation for criterion-referenced tests that look remarkably similar to the skill sheets.

Over the last several years, research in reading comprehension has provided the impetus for changes in our thinking about comprehension instruction. From this research, new instructional frameworks for teaching comprehension have been developed. Instructional studies confirm that we can do a better job of teaching comprehension using these new instructional frameworks than we can following the traditional basal reading paradigm.

The purpose of this paper is to synthesize some recent research about comprehension instruction and to present and discuss a conceptualization of explicit comprehension instruction based on that research. In order to do this we will (a) give an historical perspective on comprehension skill instruction; (b) present some of the most important instructional studies conducted over the last 6 or 7 years in order to identify the particular variables that seem to be important for success in teaching comprehension; (c) present a conceptualization of explicit comprehension instruction based on these instructional studies; and (d) discuss some questions and concerns about this conceptualization of comprehension instruction.

Historical Perspective

Until the First World War, few educators concerned themselves with the whole issue of comprehension instruction.[1] Until that time, most reading instruction consisted of oral reading, and the hallmarks of successful oral reading were accuracy and fluency. Within the short space of a single decade, however, several important changes occurred almost simultaneously: Paper and pencil tests of reading achievement became commercially available; silent reading as an instructional activity appeared in teacher's manuals and college methods textbooks, and early reading instruction shifted from a code emphasis to a meaning emphasis. These changes marked the beginning of a new era in the world of reading, an era in which reading comprehension and comprehension instruction secured a permanent and prominent place.

Comprehension instruction in early reading programs, as in today's programs, consisted of asking students specific questions about the selections they read. The hope was that if students practiced answering these questions long enough, they would get better at it. Before long, however, basal reader developers began to realize that having teachers ask questions at the end of each reading selection was not enough. This realization led to the development of the comprehension instruction strand in most basal reading programs. So, in addition to including questions in teachers' manuals, basal developers created workbooks containing activities requiring students to answer more questions, usually unrelated to the selections the students read in their textbooks. These questions were thought to be slightly more helpful than the questions asked following stories because they broke down the complex task of comprehension into skill components: finding main ideas, determining sequence, identifying cause and effect relationships, drawing conclusions, predicting outcomes, and so forth. Apparently, the hope was that if students practiced answering these skill questions in the workbook pages, then they would do a better job of answering questions after the selections they read in their student readers.

So in the decade of the twenties was born the practice of comprehension skill instruction, and the guiding principle behind that instruction--that practice makes perfect--remained largely unchallenged until the late seventies. Then, in 1978-79 Dolores Durkin pointed out what we should have realized all along: There was nothing *instructive* about our *instruction*. Durkin suggested that there was nothing in our comprehension instruction that could help students learn directly WHAT these comprehension skills

were, HOW they should actually go about applying them, WHY they should use them, or WHEN they should use them. Instead, we engaged in what she came to call "mentioning," that is, mentioning the skill students were supposed to apply; "practicing," or having students practice on the workbook pages, and "assessing," that is, assessing whether students got the right answer.

Immediately following Durkin's description of the embarrassing lack of instruction in instruction, a renaissance in instructional research in reading took place. It is not clear whether this resurgence was the direct result of Durkin's work; one must remember that the period of the middle 1970s was characterized by a feverish pace of research on the basic processes in comprehension. This research helped us understand better how expert readers comprehend text. It is probably fair to conclude that Durkin's work provided a real and practical motive for this resurgence of instructional research, while the research on basic processes provided the tools for the development of new frameworks for comprehension instruction.

Research on Comprehension Instruction

Since 1979, at least 60 studies have compared more explicit approaches to teaching comprehension with what might be called the more traditional approach of mentioning, practice, and assessment. Some of these explicit approaches have been labeled "direct instruction" approaches because they contain some or all of the elements of direct instruction identified by Becker (1977) and reviewed by Gersten and Carnine (1986), Rosenshine (1979, 1983) and Rosenshine and Stevens (1986). We will not review these direct instruction approaches to teaching specific skills in reading; they have been extensively reviewed and synthesized elsewhere (see Winograd & Hare, in press). Instead, this article reviews research on holistic comprehension that focuses on three variables: (a) the teacher's "direct explanation" (Duffy & Roehler, 1982) of comprehension strategies; (b) "guided practice" (Pearson & Gallagher, 1983) of students and teachers together; and (c) "transfer" and application of what is learned to new materials. We intend to review illustrative studies that pinpoint how these variables operate and how they differ from a traditional basal program paradigm.

Inference Training

A series of studies was conducted by Pearson and his colleagues (Gordon & Pearson, 1983; Hansen, 1981; Hansen & Pearson, 1983; Raphael & McKinney, 1983; Raphael & Pearson, 1985; Raphael & Wonnacott, 1985) in which students were given varying degrees of explicit training in inferencing. Variations across these studies notwithstanding, they share the common feature of demonstrating that students can benefit from explicit comprehension instruction, in comparison to what is found in a typical basal program.

Hansen (1981) reported the results of a study in which she attempted to teach second graders to answer inference questions. She trained two groups of above-average readers in two different instructional strategies, one providing students with extensive practice in answering inferential questions, and one giving students strategy training in integrating new knowledge with prior knowledge. This strategy training was designed to increase the likelihood that students would draw inferences on their own. A third control group was taught through the traditional basal program paradigm. At the end of 10 weeks of instruction, both the questioning and the strategy training groups answered inferential questions better. Furthermore, results on standardized reading tests favored the questioning group. Apparently, systematic guided practice and feedback in answering inferential-level questions improved student performance in answering both literal and inferential questions. Several students commented that until they received this instruction they did not know it was "ok" to use "their own words" to answer questions.

In a related study, Hansen and Pearson (1983) combined the two treatments in the Hansen (1981) study (strategy training and inferential questions) to provide modeling, guided practice, and feedback to students. They compared this hybrid treatment to another "traditional paradigm" control group. In addition, before each training session, the teacher experimenters explained to students WHAT strategy

they were going to learn, WHY the strategy was important for them to learn, and WHEN it was important to use the strategy.

After 10 weeks of training, few differences emerged among good readers; however, strong and reliable differences surfaced among poor readers. These differences favored the hybrid inference-training group. In fact, on one measure, the poor readers in the experimental group performed as well as the good control students despite a 3-year grade norm difference in average reading test scores. Differences between experimental and control groups were observed on both literal and inferential measures but were more striking on the inferential measures.

Hansen and Pearson concluded that the training was most effective for precisely those students who typically exhibit frustration in performing higher-level comprehension tasks. They suggest that the lack of consistent reliable differences among good readers might be attributed to the fact that good readers may discover the training strategies on their own. Poor readers appear to require the clear teacher explanation of what it is they are doing and how they need to go about doing it.

It is also important to note that teachers who participated in the study expressed great satisfaction with the experimental treatment, stating that their reading group discussions were more lively and interesting. They also expressed some concern about getting used to the treatment, the variety of responses offered (they had to learn to live with the fact that answers *do* vary), and the difficulty of generating good inference questions.

Gordon and Pearson (1983) continued this general line of research by developing and evaluating an even more explicit strategy for helping students improve at drawing inferences. First, they established four requisite subtasks for every inference task: (a) ask an inference question, (b) answer it, (c) find clues in the text to support the inference, and (d) tell how to get from the clues to the answer. In their 8-week training procedure, they led groups of fourth-grade students through stages varying along a continuum of responsibility for task completion, as detailed in Table 1

[Insert Table 1 about here.]

In Stage 1, the teacher models the strategy she wants students to learn, taking full responsibility for asking and answering the inference question and for finding and telling how to get clues from the text to support the answer. In Stage 4 the student takes most of this responsibility. Stage 1 represents modeling in that the teacher demonstrates how to complete the task, and Stage 4 represents independent practice in that students complete the task on their own. Stages 2 and 3 represent guided practice, where the teacher and the student work together to practice using the strategy. Instruction can be conceptualized as what happens between the stages of total teacher responsibility (modeling) and total student responsibility (independent practice).

In a series of studies, Raphael (Raphael & McKinney, 1983; Raphael & Pearson, 1985; Raphael & Wonnacott, 1985) used a different strategy for inference training but one that also employed guided practice, with that same shift from teacher to student responsibility. Raphael contended that students should vary their comprehension strategies depending on the task demands of the question (Does it look like I should go to the text or to my head for an answer?) and the information available (What does the text say about this? and What do I already know about this?). Based upon Pearson and Johnson's (1978) trichotomy for classifying question-answer relations, she taught fourth-, sixth-, and eighth-grade students to discriminate among three situations depending on: (a) whether both the question and the answer come from the same sentence in the text; (b) whether the question and the answer come from different parts of the text; (c) and whether the question is motivated by the text but the answer comes from the reader's prior knowledge. For example, if the text reads:

Matthew was afraid Melissa would beat him in the tennis match.

He broke both of Melissa's rackets the night before the match.

then these questions would be asked:

1. Who was afraid? Matthew.
2. Why did Matthew break both of Melissa's rackets? He was afraid Melissa would beat him.
3. Why was Matthew afraid? Maybe Melissa was a better player.

Raphael (Raphael & McKinney, 1983; Raphael & Pearson, 1985; Raphael & Wonnacott, 1985) taught students to label these three strategies RIGHT THERE, THINK and SEARCH, and ON MY OWN, respectively, as they answered the questions. In their work, they found that all students who received systematic and explicit instruction in this process training strategy was better able to comprehend new texts and to monitor their own comprehension. Like students in the Hansen and Pearson (1983) study, one student said, "I never knew I could get answers from my head before."

Raphael's procedure (see Raphael, 1982, for complete details) is similar to Gordon and Pearson's in that responsibility for task completion was gradually shifted from teacher to student. The entire procedure can be thought of as the completion of four tasks (see Table 2), consisting of: (a) asking a question, (b) answering it, (c) classifying the Question-Answer Relationship, and (d) telling why it deserves that classification.

[Insert Table 2 about here.]

Notice how Stages 1-4 represent the same sort of logic present in the Gordon and Pearson (1983) work. Raphael, however, added a Stage 5, one in which students generate their own questions and then apply the other subtasks. This additional "application" step might represent "true ownership" of the strategy because, at this point, students can apply the strategy to any reading situation.

These studies demonstrate several important characteristics of the explicit comprehension model. First, teachers *model* what it is they want their students to do, and teachers show students exactly how to go about doing it. Second, teachers and students work together before students are asked to practice on their own. This *guided practice* phase of the model is crucial; teachers slowly and gradually turn the responsibility for completing the task over to students. And, lastly, Raphael added the additional important step of *application*, that is, of having students be able to transfer their learning to new reading materials.

Reciprocal Teaching

Brown and Palincsar (1985) report the results of another line of research using a particularly successful instructional technique, *reciprocal teaching*; it represents yet another example of explicit comprehension instruction. They selected four key strategies that novice readers must learn in order to learn from texts and developed a teaching procedure to train poor readers to use these strategies: summarizing the main content; formulating potential test questions; clarifying hard parts of text; and predicting future content. Central to their procedure was the concept of "expert scaffolding, where an expert (a teacher, a peer, a parent or master craftsman) provides a supporting context in which students may gradually acquire skills" (p. 13). The expert was expected to model the desired comprehension strategies and to explain to students why the strategies were used and how to go about using them. Students were expected to assume responsibility for the use of the strategies gradually until they could perform them on their own. The strategies were always modeled and used in content area textbook passages rather than in isolated skill exercises.

Brown and Palincsar achieved remarkable success using the reciprocal teaching procedure. Small groups of poor readers improved on their daily independent comprehension test scores from below 40% correct to over 75% correct. This level of success was maintained 8 weeks after the intervention had ceased. Moreover, after one reintroduction of the treatment 6 months later, performance again reached a criterion of over 75% correct.

Performance improved as measured by other tests as well. Over a 4-month period, students in the reciprocal teaching group averaged a 20-month gain on a standardized measure of comprehension as compared to a 1-month gain made by a control group. The control group moved from the 13th to the 11th percentile in a social studies test and from the 20th to the 19th percentile in a science test; by contrast, the reciprocal teaching group improved from the 25th to the 78th percentile in social studies and from the 5th to the 69th percentile in science. Lastly, in a series of transfer tests (Palincsar & Brown, 1984), reciprocal teaching students showed reliable improvement on selected transfer tests of both reading and writing.

Brown and Palincsar (1985) conducted a series of follow-up studies to determine if the positive effects of the reciprocal teaching procedure could be replicated when master teachers, average classroom teachers, and peer tutors assumed responsibility for the teaching. They found that all three groups achieved success using the reciprocal teaching procedure. In addition, Brown and Palincsar conducted a series of comparative instructional studies where they found that their reciprocal teaching procedure was superior to a practice-alone treatment or an isolated skills treatment. Their treatment was also superior to two additional comparative treatments, one in which students did not gradually assume responsibility for their own learning, and one in which the rate of transfer of learning from teacher to student was determined a priori instead of naturally. In both cases the reciprocal teaching procedure, which allowed students to learn on their own time and at their own pace, resulted in significant improvements in comprehension.

This group of studies provides compelling evidence that comprehension can be taught after all. The studies also suggest that what may be missing from our current paradigm is teacher modeling of specific strategies for learning how to comprehend, teacher guidance that helps students learn those strategies over a period of time, and student practice in transferring the strategies to new learning situations.

Program Evaluations

There have been at least two projects in which new ideas based on reading comprehension research have been incorporated into a reading curriculum and then direct instruction techniques have been applied to teach that curriculum. Both of these studies claim to use elements of the direct instruction model advocated by Becker (1977) and reviewed by Rosenshine (1976, 1979) among others.

KEEP. The Kamehameha Early Education Project (KEEP) has been discussed in several articles (e.g., Au & Mason, 1981; Hao, in press; Tharp, 1982). KEEP represents an attempt to develop a reading program in which some of the components of direct instruction that Becker (1977) identified are combined with an instructional style that is characteristic of more informal teaching. The project has proven to be highly successful in improving the comprehension abilities of high-risk native Hawaiian children.

The curriculum program set up for the KEEP project is a good example of the new explicit comprehension instruction. Au and Mason (1981) label the curriculum "direct instruction," although many guidelines advocated by Becker (1977) are missing (See Shannon & Fernie, 1982, for a critique.) What the KEEP curriculum does have is: (a) active, direct teaching of comprehension for 20 minutes a day; (b) positive reinforcement of student responses; and (c) continuous monitoring of and feedback about student achievement (Tharp, 1982).

In addition, teachers work with small groups of students using a free interaction pattern consistent with the social interactive patterns of native Hawaiians (Au & Mason, 1981). That is, the teacher and students interact freely, sometimes even talking at the same time. This pattern was designed to approximate the verbal exchange in the culturally familiar "talk story."

Teachers rely heavily on a variety of levels of questions and discussion for comprehension instruction in KEEP. Teachers design questions that encourage speculation and relate the text to students' personal experiences. Like Hansen (1981), the KEEP project uses an "inundation-discovery approach" (Pearson & Gallagher, 1983) to teaching comprehension. The idea is that extensive guided practice in answering a variety of questions will help students improve at answering questions on comprehension tests.

Not surprisingly, students in KEEP have become better at answering questions on comprehension tests. Comprehension scores of KEEP children on standardized reading tests have been shown to be superior to scores obtained by comparable students in a phonics-based program and in a public school program (Tharp, 1982).

Process training. Two separate examples of curriculum programs dealing with explicit comprehension instruction come from the state of Michigan. In the first, Paris and his colleagues (Paris, Cross, & Lipson, 1984) developed a comprehensive reading curriculum, Informed Strategies for Learning (ISL), that focuses on teaching comprehension processes and content rather than on comprehension skills. These content and process comprehension strategies have been identified in reviews of the research (Brown, Palincsar, & Armbruster, 1984; Duffy, Sherman, & Roehler, 1977): for example, understanding purposes for reading, activating relevant background knowledge, allocating attention to main ideas, critical evaluation, monitoring comprehension, and drawing inferences. Students were taught *how* and *when* to apply the strategies, and *why* the strategies were effective. Paris et al. hypothesized that teaching students the ISL strategies would improve their reading comprehension.

The year-long curriculum program produced interesting data. Students' knowledge about reading strategies improved significantly. Students in the program outperformed students in a control group on cloze and error detection tasks, although results on standardized reading tests did not favor the ISL group.

The second line of research on process training comes from a series of studies conducted over the last 5 years by Duffy, Roehler and their colleagues (Duffy, Roehler, Meloth, Vavrus, Book, Putnam & Wesselman, 1986; Roehler, Duffy, Putnam, Wesselman, Sivan, Rackliffe, Book, Meloth, & Vavrus, 1987). They have attempted to teach low ability readers what they call "strategic use of reading skills." Drawing from the comprehension research that emphasizes the strategic nature of reading (Brown, 1981; Paris et al. 1984; Pressley, Forest-Pressley, Elliot-Faust, & Miller, 1985) and from the relationship between metacognition and reading (Baker & Brown, 1984), Roehler et al. hypothesize that low ability readers need to learn to monitor their comprehension activities and to develop strategies to use when comprehension breaks down.

Duffy and Roehler (1982) argue that their instructional approach is unique. They point out that their training is different from the direct instruction model in that direct instruction focuses on teacher behaviors which increase time on task in student attending behaviors. Duffy et al.'s (1987) work, however, emphasizes transforming skills into strategies that can be used by readers to help them comprehend. Duffy and Roehler (1982) also argue that their work differs from the explicit instructional comprehension research of the type conducted by Pearson and his colleagues. Duffy et al.(1987) argue that the former focuses on "activities that encourage but do not explicitly explain" the mental acts involved in reading (p. 7). In contrast, Duffy and Roehler's work emphasizes exactly how readers use particular strategies (e.g., how to go about finding the main idea) when they read.

The Duffy and Roehler research team has studied over 50 teachers for an academic year in their natural classroom environment. In general, they wanted to know whether teachers who provided explicit

explanation of the mental processes in reading would be more effective in increasing low readers' awareness of both lesson content and the need to be strategic when reading. They also wanted to know if such training would result in improved reading achievement for poor readers.

Results from the series of studies conducted by Duffy et al. (1987) demonstrated that students can learn to be strategic readers. Poor readers in the treatment groups increased their awareness of what teachers were trying to teach them and of their need to be strategic when reading. Students in the treatment groups also outperformed controlled students on the Michigan Educational Assessment Program (MEAP). Treatment groups, however, did not outperform control groups on the transfer task represented by a standardized comprehension test. Duffy et al. (1987) (like Paris et al., 1984) point to the mismatch between the curriculum of standardized tests and their process training. The MEAP, on the other hand, represents a curriculum more representative of what was taught by the teachers in their studies.

Explicit Comprehension Instruction

The concept explicit comprehension instruction presented here differs from the traditional basal paradigm of mentioning, practice, and assessment in at least three important ways. First, teachers do not merely *mention* what the skill or strategy is. Instead, teachers *model*, or provide direct explanation of WHAT, HOW, WHY, and WHEN a comprehension strategy ought to be used. Second, students do not simply *practice* on their own. Instead, teachers provide *guided practice* in which they gradually and slowly release responsibility for task completion to students until they are able to complete the task on their own.

Finally, teachers do more than *assess* whether students can perform the strategy. Instead teachers ask students to *apply* their strategies to new and different reading situations.

Modeling. Usually in this step, teachers emphasize WHAT the skill or strategy is and HOW to apply the skill/strategy to a given reading selection. To do this, teachers begin by modeling for students how to apply the skill/strategy. Often this involves teachers thinking aloud as they are reading, a "sharing of the cognitive secrets of the teacher's success," if you will.

Guided practice. In this step, teachers and students work together to figure out HOW they went about applying the skill. The teachers' role in this step is to work with students to discuss why they rejected some information and settled on other information and what they found difficult or confusing and why. Teachers also provide feedback and encouragement for students as they "share publicly their cognitive secrets." Teachers intervene when students are stumped or unresponsive; teachers then assume some of the responsibility for completing the task.

Consolidation. Here teachers consolidate, helping students see WHAT the skill or strategy is and HOW to apply it. They may also, at this step, ask students WHY they should use the skill or strategy as well as WHEN (for what kinds of texts or assignments) they might use it.

Independent practice. In this step, students complete a worksheet or workbook page where they assume near total responsibility for determining what the skill/strategy is and how to apply it. Following the first few independent practices, especially for students who experience difficulty completing the tasks on their own, it is useful to discuss both students' correct and inappropriate responses *as well as* their reasons for choosing or creating them. Such "reconsolidating" discussions can prevent continued patterns of failure.

Application. Application is a critical step, one often omitted from instructional cycles. In this step, teachers ask students to apply the skill/strategy, and students move from workbook pages to real text. In the application step, students look for examples of the skills in the selections they read from week to week, finding paragraphs that do or do not have main ideas, or examples of statements of fact or opinion, or instances of clear or unclear sequences of events. In the application step, teachers emphasize the

WHEN and the WHY of the skills or strategies. It is in this informal application that, hopefully, students realize true "ownership" of their strategies.

Questions About Explicit Instruction

We have compelling evidence that the kind of comprehension instruction discussed here works, and is better than the traditional basal program paradigms of mentioning, practice, and assessment. And we believe the comprehension model is sufficiently different from older models of direct instruction. Next we want to present some answered and unanswered questions about the model.

Unique features. People may wonder what this conceptualization offers that is different from other models of direct instruction, such as, Becker's (1977) or Rosenshine's (1979). After all, the stages are especially similar to those of Rosenshine: Modeling, practice, and application are features of both. Feedback at stages is critical (even when the teacher is not the "teacher," s/he must provide feedback about how well the group is accomplishing its goals along the way).

The concept we present is unique in several important ways. First, and perhaps most important, there is no assumption that complex strategies must be broken down into separate, sequentially ordered subskills. In the older models of direct instruction (Becker, 1977), skills were broken down and taught as small subskills. In the explicit instructional research, however, the whole comprehension task is subdivided, but not into subskills. Each time a task is performed, the *whole* task *is* performed. What differs from one stage to the next is the number of components of the whole task performed by the teacher *or* the students. It is possible, therefore, to talk about explicit instruction in wholistic strategies.

Second, there is no single correct answer to any question or single best way to apply a strategy. This is in contrast to older models of direct instruction, which had correct answers. Variation in responses in the explicit instruction model can be expected, and is even encouraged. On the other hand, what is expected is that: (a) answers, summaries, or strategy applications can be justified; and (b) students will assume responsibility for monitoring them.

Third, in explicit instruction, feedback is not *corrective* in the sense that the teacher gives the right answer or strategy when a student fails. Instead, feedback is more *suggestive* in the sense that the teacher praises students for applying parts of the strategy appropriately and encouages students to consider alternative ways of attacking a problem.

Implementing explicit instruction. There are at least two questions to be raised by the concept explicit instruction, and for which we have little confidence in our answers. One question is this: Which aspects of the concept are the most difficult for teachers to implement successfully in clasrooms? Feedback and independent practice are not new to most teachers. Application, though somewhat new, could be easily learned. We believe that modeling and guided practice will be much harder for teachers to learn, and will therefore take more extensive teacher training to implement successfully in classrooms.

Teachers will need time to get used to the idea of modeling comprehension strategies. Teachers are unfamiliar with the think-aloud process; they are not conscious of how they go about finding the main idea of a paragraph or correcting a comprehension failure. At this point it is highly unlikely that many teachers can or will model or share their own thinking about comprehension processes publicly, some will be embarrassed to do so, others will deny that it is their responsibility to engage in such efforts, and still others will be unaware of how they think when they comprehend written text.

Duffy (1983) offers an additional and perhaps more interesting argument for why teacher modeling and explanation will be difficult to implement. He argues that reading instruction in American schools is accomplished by assigning turns to students, usually without explanations. American teachers are used to asking questions and getting answers (as Durkin's 1978-79 study showed), and they equate this turn-taking pattern with instruction. As Duffy argues, however, this instructional pattern may well impede

effective comprehension instruction, particularly for poor readers who may need direct explanation of how to comprehend.

We also think that guided practice, that set of steps in which teachers attempt to gradually release task responsibility to students, will be problematic for teachers to implement. The process of guided practice is dynamic and interactive, and it is the most unpredictable of all the elements in the model.

We can draw from the instructional research to consider how teachers might go about guiding students to take more responsibility. In the Gordon and Pearson (1983) and the Raphael (Raphael & McKinney, 1983; Raphael & Pearson, 1985; Raphael & Wonnacott, 1985) work, the release of responsibility was accomplished by conceptualizing the task in question as being comprised of components that could be shared by students and teachers. The release, then, was accomplished by gradually decreasing the number of components of the total task under teacher control and simultaneously increasing the number of components under student responsibility and control.

In Palincsar and Brown's (1983) work, the release was accomplished by having students gradually take over the role of "teacher." The goal was to get students to perform four tasks for any given expository passages. Again, a complex task was broken down into smaller units, and then the responsibility of teaching these units moved from teacher to student.

Finally, in the work of Paris et al. (1984), the release was accomplished via practice/feedback discussion sessions. During these sessions students shared their insights about how they monitored the tasks they were asked to complete. Gradually they learned how to take on full responsibility for their learning.

So, it is quite possible to train teachers and students to gradually decrease and increase their respective roles in the teaching/learning process. This step is a crucial one in the explicit comprehension model, but one that will need careful attention as research is being translated into classroom practice.

Another unanswered question is this: Is it possible for basal programs to incorporate features of explicit comprehension instruction into their teacher's manuals? Teacher modeling of specific comprehension strategies can be and is being scripted into manuals now (cf. Ginn, 1985; Houghton Mifflin, 1986), but the consequences of the scripting will not be known for a while. The scripting extensively lengthens the teachers' manuals. Will teachers bother to read it? And, if so, will they actually use it in instruction? If they do, will they be as effective as experimenters or trained teachers using it in classrooms?

Curriculum Concerns: What Should Be Taught?

Despite the weight of the evidence that seems to support the explicit instruction model, some problems and unresolved issues in this domain remain. We now want to assume the role of critics to point these out.

One serious concern we have about comprehension instruction relates to the curriculum itself: We are concerned about *what* it is that ought to be taught in order to improve comprehension. Should *skills* be taught? Should comprehension *processes* be taught? Or should the content of the text be taught, irrespective of the skills and processes involved in comprehending that content?

Consider the first question. Although we do have evidence that teaching comprehension skills, particularly through an explicit instruction paradigm, improves comprehension performance on certain tests, we do not know how generalizable and valid these results are, particularly since our dependent measures are so intimately related to the skill instruction paradigm itself (cf. Paris et al., 1984). Would comprehension performance improve just as much if we were to change the dependent measures we used to measure improvement?

After all, the validity of comprehension skills has remained elusive for decades. Are there discrete comprehension skills that we should teach? Numerous studies conducted by Davis (1968, 1972) and others (Dole, 1981; Guzzetti, 1984; Schreiner, Hieronymus, & Forsyth, 1969; Spearritt, 1972; Thorndike, 1973) have found limited or no evidence of the existence of discrete skills in reading comprehension. After reviewing the research in this area, Rosenshine concludes (1980), "It is not clear whether all, or even any, of the skill exercises in reading comprehension are essential or necessary. . . . Indeed it is possible that students who only read stories and never completed skill exercises might do just as well on comprehension tests as students who completed these exercises" (p. 552). Yet comprehension skill exercises continue to flourish in elementary reading programs and in instructional research on comprehension. Even if we can prove that teaching comprehension skills improves performance on those skills, we ought to be questioning our theoretical paradigm in light of the research on discrete comprehension skills. This notion is consistent with the view (implicit, if not explicit) of some reading researchers (Goodman & Goodman, 1979; Harste & Burke, 1977; Harste, Burke, & Woodward, 1982) who argue that the entire skills orientation misses the point about comprehension in particular and reading in general.

The issue of discrete skills is less a problem with explicit comprehension instruction and the research studies received here because these studies used a more holistic approach to comprehension instruction. The problem remains critical, however, because our curriculum and assessment are so tied to the teaching of discrete skills in comprehension.

Secondly, should comprehension processes be taught at all? The Raphael et al. (Raphael & McKinney, 1983; Raphael & Pearson, 1985; Raphael & Wonnacott, 1985) studies demonstrated that comprehension could be improved by teaching students to monitor the process of comprehending--that is, by helping students become aware of where they get information to answer questions in a text. The Paris et al. (1984) and the Duffy et al. (Duffy & Roehler, 1982; duffy, Roehler Meloth, Vavrus, Book, Putnam & Wesselmann, 1986; Duffy, Sherman, & Roehler, 1977) studies, however, using more extensive comprehension-monitoring curricula, raise important questions about teaching comprehension processes--students improved on some dependent measures, but not on standardized tests. Was that because standardized tests are based on a different theoretical or instructional paradigm, as Paris et al. (1984) argue? Or, could it be that making the comprehension process explicit does not, in the end, improve comprehension? Alternatively, could it be that explicit instruction about processes improves comprehension for some readers but not for others? These empirical questions remain to be answered by research.

Thirdly, we have to consider whether comprehension instruction should involve teaching neither skills nor processes, but content itself. This argument stems from research on the importance of background knowledge to performance on a variety of comprehension tasks. Perhaps what really determines the ability to comprehend anything is how much one already knows about the topic under discussion in a text. If this is true, then one way to improve reading comprehension might be to help students learn more about everything. With a specific text, instruction might revolve around the *content* of the text itself, using background knowledge and linguistic cues to make sense out of the content--much like instruction a teacher would engage in when using a science or social studies text. In other words, if teachers put the focus on helping students deal with the content, perhaps comprehension skill acquisition will occur almost incidentally.

As suggested by the work of Hansen and Pearson (1983), perhaps the necessity for explicit instruction depends upon students' aptitudes. It could be that good readers intuitively know how to go about getting meaning from text because they know more about everything they read. Perhaps good readers do not need instruction in comprehension at all, and poor readers will benefit from additional emphasis on comprehension. Or, perhaps poor readers need to be treated like good readers, as suggested by Allington (1983). Lastly, perhaps what poor readers need is to have made explicit that which is implicit for good readers--whether it be skills or processes or content.

This situation brings us to a final sobering possibility: What if, in our rush to be helpful to those students most in need of help, we do them a disservice (Rohwer, 1980)? What if our instruction is simply wrong? What if teachers tell students to use the wrong strategies or to look for the wrong ideas? Eaton, Anderson, and Smith (1984) found that teachers with limited backgrounds can teach incorrect content or fail to recognize and correct students' distorted understandings in science. Rohwer (1980) raises the possibility that if instruction is misguided, then those who get more instruction (i.e., the low achievers) will be disadvantaged in comparison to those we leave to their own devices (i.e., the high achievers). What if teachers mislead students in modeling comprehension strategies or in explaining how they comprehend a text? Or, what if teachers make the task far more complicated than it really is? We have to consider the possibility that all the attention we are asking students to pay to their use of skills and strategies and to their monitoring of these strategies may turn relatively simple and intuitively obvious tasks into introspective nightmares.

Conclusion

Although these alternatives and criticisms of explicit comprehension instruction may somewhat bridle our enthusiasm for the model we advocate, they should not prevent us from continuing our efforts to understand what constitutes effective comprehension instruction and to persuade teachers and administrators to consider these instructional techniques as they develop reading programs. The emphasis on basal reading materials as the center of the school curriculum, and mentioning, practice, and assessment as the dominant method of developmental instruction has had its day for several decades. It is time to give equal time to teaching.

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Footnote

[1]The conclusions drawn here about reading instruction during the teens and twenties come from four sources: Nila Banton Smith's *American Reading Instruction*, Milford Mathews, *Teaching to Read: Historically Considered*, a review of programs published during the period, and the authors' discussions with reading educators who lived through these earlier days of reading instruction. The conclusions about later periods come from examinations of materials and reviews of materials like those of Durkin (1981) and Beck and her colleagues (Beck, McKeown, McCaslin, & Burkes, 1979).

Table 1

Stages of Responsibility in Inference Training Task (after Gordon & Pearson, 1983)

	Substasks			
Stages	Ask Question	Answer Question	Find Clues	Line of Reasoning
1. Modeling	T	T	T	T
2. Guided Practice	T	T	S	S
3. Guided Practice	T	S	T	S
4. Independent Practice	T	S	S	S

Note. T = Teacher does subtask, S = Student does subtask

Table 2

Stages of Responsibility in Question-Answer Relationship Task (after Raphael, 1982, 1984)

	Subtasks			
Stages	Ask Question	Answer Question	Assign QAR Classification	Justify Classification
1. Modeling	T	T	T	T
2. Guided Practice	T	T	T	S
3. Guided Practice	T	T	S	S
4. Independent Practice	T	S	S	S
5. True Ownership	S	S	S	S

Note. T = Teacher does subtask, S = Student does subtask.